

This listing of claims replaces all prior listings.

1-6. (Cancelled).

7. (Currently Amended) A method of manufacturing a solid-electrolyte battery comprising:

forming a first set of gel-electrolyte layers on both sides of a positive electrode collector;

forming a second set of gel-electrolyte layers on both sides of a negative electrode collector;

forming a positive electrode comprising the first set of gel-electrolyte layers on both sides of the positive electrode collector;

forming a negative electrode comprising the second set of gel-electrolyte layers on both sides of a negative electrode collector;

laminating said positive electrode and said negative electrode such that one of the first set of gel-electrolyte layers and one of the second set of gel-electrolyte layers face each other;

winding said positive electrode and said negative electrode such that another one of the first set of gel-electrolyte layers and one of the second set of gel-electrolyte layers face each other;

sealing the wound electrode in a film pack formed by laminating a nylon layer, an aluminum layer and a polypropylene layer on the wound electrode and welding an outer end of the ~~wound electrode~~ film pack; and

after sealing said wound electrodes into the film pack, subjecting said wound electrodes to heat treatment so that each of the first set of gel-electrode layers and the one of the second set of gel-electrolyte layers facing each other are integrated with each other into one continuous seamless layer by heating the laminated electrode in an atmosphere having a temperature of between 70 and 100 degrees C,

wherein,

said gel-electrolyte layers comprise an electrolyte salt, a matrix polymer, and a swelling solvent serving as a plasticizer,

said gel-electrolyte layers comprises  $\text{LiPF}_6$ ,

the positive electrode active material has a density of  $3.6 \text{ g/cm}^3$  and the negative electrode active material has a density of  $1.6 \text{ g/cm}^3$ ,

said matrix polymer includes polyvinylidene fluoride and  
polyhexafluoropropylene, and

the matrix polymer has an ion conductivity higher than 1 mS/cm at room  
temperatures.

8-9. (Canceled).

10. (Original) The method of claim 7, wherein said wound electrodes are subjected to  
heat treatment for ten minutes.

11-12. (Cancelled)

13. (Previously Presented) The method of claim 7, wherein said nonaqueous solvent is  
selected from the group consisting of ethylene carbonate, propylene carbonate, butylene  
carbonate,  $\gamma$ -butyrolactone,  $\gamma$ -valerolactone, diethoxyethane, tetrahydrofuran, 2-  
methyltetrahydrofuran, 1, 3-dioxane, methyl acetate, methyl propionate, dimethylcarbonate,  
diethyl carbonate or ethylmethyl carbonate or their mixture.

14.-16. (Cancelled)

17. (Currently Amended) A method of manufacturing a solid-electrolyte battery  
comprising:

forming gel-electrolyte layers on both sides of a positive electrode and a negative  
electrode, wherein one of said solid-electrolyte layers formed on said positive electrode and one  
of said gel-electrolyte layers formed on said negative electrode face each other;

winding said positive electrode and said negative electrode after pressing;

sealing the wound electrode in a film pack formed by laminating a nylon layer, an  
aluminum layer and a polypropylene layer on the wound electrode and welding an outer end of  
the wound electrode film pack; and

after sealing said wound electrodes into the film pack, subjecting said wound electrodes  
to heat treatment so that said gel-electrolyte layers formed on said positive electrode and said  
gel-electrolyte layers formed on said negative electrode are integrated with each other into one  
continuous seamless layer by heating the laminated electrode in an atmosphere having a  
temperature of between 70 and 100 degrees C,

wherein,

said gel-electrolyte layers comprise an electrolyte salt, a matrix polymer, and a  
swelling solvent serving as a plasticizer

said gel-electrolyte layers comprises  $\text{LiPF}_6$ ,

the positive electrode active material has a density of  $3.6 \text{ g/cm}^3$  and the negative electrode active material has a density of  $1.6 \text{ g/cm}^3$ ,

said matrix polymer includes polyvinylidene fluoride and polyhexafluoropropylene, and

the matrix polymer has an ion conductivity higher than  $1 \text{ mS/cm}$  at room temperatures.